

Citation 8

Publication No.: 3107/97 (JP)
Publication Date: January 7, 1997
Application No.: 295302/95 (JP)
Filing Date: November 14, 1995
Priority: 96907/95 (JP); April 21, 1995
Applicants: SEKISUI CHEMICAL CO LTD
Title of the Invention: Acryl emulsion adhesive

Claim 1 of Citation 8

An acryl emulsion adhesive consisting of

(i) 100 parts by weight of acrylic copolymer comprising as an essential component, 1) 90 to 98 % by weight of at least one (meth)acryl ester represented by general formula of $\text{CH}_2=\text{CR}_1-\text{COOR}_2$, wherein R1 is hydrogen or methyl group, R2 is C4-14 alkyl group; and 2) 10 to 2 % by weight of at least one monomer selected from the groups consisting of carboxyl group containing monomer, amide group containing monomer and hydroxyl group containing monomer;

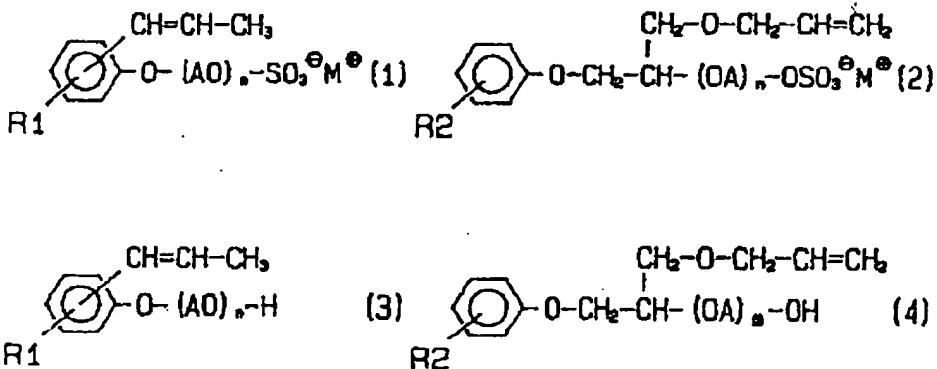
(ii) 5 to 100 parts by weight of a tackifier resin;

wherein the acryl emulsion adhesive is prepared by (a) preparing a monomer mixture consisting of 1) the (meth)acryl ester and 2) at least one monomer selected from the groups consisting of carboxyl group containing monomer, amide group containing monomer and hydroxyl group containing monomer; (b) preparing an emulsion of tackifier resin with an emulsifier; (c) dropping and polymerizing the monomer mixture to the emulsion of the tackifier resin to obtain Polymer (A); (d) emulsion polymerizing the monomer mixture consisting of 1) the (meth)acryl ester and 2) at least one monomer selected from the groups consisting of carboxyl group containing monomer, amide group containing monomer and hydroxyl group containing monomer to obtain Polymer (B); and (e) mixing Polymer (A) and Polymer (B) to obtain the acryl emulsion adhesive.

Citation 8 (cont.)

Claim 3

The acryl emulsion adhesive according to Claim 1 or 2, wherein the emulsifier is at least one selected from the chemical formula [1], [2], [3] and [4], wherein R1, R2 is C6-18 alkyl group, alkenyl group, or aralkyl group, "m" is an integer from 8 to 40, "n" is integer from 8 to 40, "A" is C2-4 alkylene group or substituted alkylene group, "M" is alkali metal ion, ammonium ion, or alkanol amine ion.



Example 1

An adhesive was prepared by mixing Solution (A) and Solution (B).

Solution (B) was prepared by emulsion polymerizing 100 parts of water, 0.05 parts by weight of n-dodecyl mercaptan, 56 parts by weight of n-butyl acrylate, 40 parts by weight of 2-ethylhexyl acrylate, 2 parts by weight of acrylic acid, 2 parts by weight of methacrylic acid, 1 part by weight of propenyl group containing polyoxyethylene nonyl phenyl ether sulfate ammonium (EO 10 mol), 0.5 parts by weight of propenyl group containing polyoxyethylene nonyl phenyl ether sulfate ammonium (EO 20mol).

Solution (A) was prepared by dropping and polymerizing a monomer mixture comprising 56 parts by weight of n-butyl acrylate, 40 parts by weight of 2-ethylhexyl acrylate, 2 parts by weight of acrylic acid, and 2 parts by weight of methacrylic acid to a reactor which comprises 100 parts by weight of deionized water and 200 parts by weight of aqueous emulsion (50% solid) of tackifier resin (disproportionated rosin ester) comprising 1.5 part by weight of propenyl group containing polyoxyethylene nonyl phenyl ether sulfate ammonium (EO 10 mol).